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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,493	03/22/2002	Solomon B. Margolin	183-109(US)	9283

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EXAMINER	
HUGHES, ALICIA R	

ART UNIT	PAPER NUMBER
1614	

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/646,493	MARGOLIN, SOLOMON B.	
	Examiner	Art Unit	
	Alicia R. Hughes	1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10 and 16-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10 and 16-18* is/are rejected.

7)☒ Claim(s) *10 and 16-18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of the Claims

Claims 10 and 16-18 are pending and the subject of this Office Action. Applicant withdrew claims 1-9 in the response filed on 3 September 2004 and claims 11-15 were cancelled in the response filed on 19 August 2005.

Objections

The applicant is reminded of the importance of proofreading in an effort to avoid misunderstanding of claims and information included in the specification by readers due to spelling and grammatical errors. Claims 10 and 18 are objected to specifically because of the following informalities: (1) *vulgaris* is misspelled in claim 10; (2) *coxsackie* is misspelled in claim 10; (3) *aspergillus* is misspelled in claim 10; (4) and Empilan is misspelled in claim 18. The specification is objected to, generally, because it contains a number of grammatical, spelling, and syntactical errors.

Claim 18 is objected to under 35 U.S.C. §112, second paragraph, because it uses a trade name, Empilan, as a limitation describing a particular material included in a claimed substance. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. §112, second paragraph. See Ex parte Simpson, 218 USPQ 1020 (Bd. App. 1982).

The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a

source of goods, and not the goods themselves. The applicant should refer to Empilan by its generic name, coconut monoethanolamide.

Appropriate correction is required.

Claim Rejections 35 U.S.C. §112.1

The following is a quotation of the first paragraph of 35 U.S.C. §112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 10 and 16-18 are rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for a method of disinfecting the skin, does not reasonably provide enablement for a method of treating "one or more conditions created by microorganisms." The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with the claim.

Claim 10 is drawn to any generic condition (Claim 10, Line 2) that may be caused by microorganisms while the specification is limited to antiseptic treatment of microorganisms rather than conditions created by them. As a result, the effect of performing the invention by one skilled in the art would be that of undue experimentation.

Factors to be considered in determining whether a disclosure would require undue experimentation have been summarized in Ex parte Forman, 230 USPQ 546 (BPAI 1986) and

reiterated by the Court of Appeals in In re Wands, 8 USPQ2d 1400 at 1404 (CAFC 1988). The factors to be considered in determining whether undue experimentation is required include: (1) the quantity of experimentation necessary, (2) the amount or direction presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.

The Board also stated that although the level of skill in organic chemistry and microbiology is high, and the results of experiments to discover treatments for pathogenic conditions are unpredictable. While all of these factors are considered, a sufficient amount for a *prima facie* case is discussed below.

Although the applicant has provided a number of working examples of the pharmaceutical substance in claim 10 inhibiting continued growth of colonies of specified microorganisms, *in vitro*, the applicant has failed to disclose **any** condition to be treated by the claimed invention. While arguably, one of skill in the art, such as a physician or biomedical researcher with a master's degree or Ph.D. in the natural sciences, would be able to choose **a** viral, bacterial, or fungal infection, the number of infections caused by an excessive presence of the microorganisms listed in claim 10 is so plenteous and virulence of all so variable, and the drugs used to kill the microorganisms and treat conditions caused by them so different, that the art of the claimed invention lacks predictability because claim is drawn too broadly.

Claim Rejections - 35 U.S.C. §112.2

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10 and 16-18 are rejected under 35 U.S.C. §112, second paragraph for indefiniteness. The phraseology "one or more conditions created by microorganisms" in claim 10 is relative and therefore, renders the claim indefinite. The phraseology "created by" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 10 lists a number of pathogenic microorganisms known to cause or be associated with causes of numerous conditions or diseases. The microorganisms do not ***create*** diseases, as stated in the claim, inasmuch as the diseases are ***caused by*** microorganisms. For example, pneumonia is not created by the bacterium *Staphylococcus aureus*. However, pneumonia is "caused by" an excessive presence of *Staphylococcus aureus* in immuno-deficient environments. Additionally, claim 10 is indefinite because it does not draw a correlation between microorganisms and the diseases caused by them.

Claim Rejections – 35 U.S.C. §103(a)

The following is a quotation of 35 U.S.C. §103(a), which forms the basis for all obviousness rejections set forth in this office action:

> (a) A patent may not be obtained through the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

> subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. §103(a) as being obvious over Margolin (U.S. Patent No. 5,310562) in view of Gadekar (U.S. Patent No. 4,052,509). The instant claim is drawn to the following:

> A method of treating one or more conditions created by microorganisms from the group consisting of *Escherichia coli, Staphylococcus aureus, Bacillus subtilis, Pseudomonas aeruginosa, Proteus vulgaris, Trichophyton mentagrophytes, Candida albicans, Aspergillus niger*, Influenza virus, Coxsackie virus, Herpes virus, and Papilloma virus on the surface of, or within, the layers of the dermis of skin, ears, fingernails, toenails, or hoofs of mammalian species, comprising: applying to said surface or layers a pharmaceutical substance containing an effective amount of pirfenidone.

Gadekar teaches that 5-methyl-1-phenyl-2-(1H) pyridone (commonly referred to as pirfenidone) is an anti-inflammatory (Gadekar Col. 2 lines 10-13) that can treat, with therapeutic effectiveness, "skin conditions" (Gadekar Col. 2, lines 50-53). Margolin teaches a method for the treatment and prevention of fibrotic lesional tissue in mammals that are associated with a number of conditions, including skin lesions, by topically administering a pharmaceutical composition containing 5-methyl-1-phenyl-2-(1H)-pyridone, an anti-fibrotic agent, as an active ingredient in an amount of from about 5% to about 10% (Margolin Claims 4, 16, and 17, Columns 11 and 12).

Neither Gadekar nor Margolin specifically teach, however, that the topical administration of a pharmaceutical substance containing an "effective amount of pirfenidone" can treat conditions caused by microorganisms from the group consisting of *Escherichia coli, Staphylococcus aureus, Bacillus subtilis, Pseudomonas aeruginosa, Proteus vulgaris,*

Trichophyton mentagrophytes, Candida albicans, Aspergillus niger, Influenza virus, Coxsackie virus, Herpes virus, and Papilloma virus.

It is well-known in the art, however, that skin conditions and infections can be caused by certain microorganisms. For example, epithelial hyperplasia, commonly referred to as warts are often caused by the human papillomavirus (Singleton, Definition of papilloma and papillomavirus at 632-633). *Staphylococcus aureus* is a common bacteria known to cause skin and wound infections, such as impetigo (Singleton, Definition of impetigo at 448). *Staphylococcus aureus* is also known to cause cellulitis (Singleton, Definition of cellulitis at 162), a deep infection that generally results from breaks in the dermis of the skin and sometimes even invades subcutaneous spaces. *Candida albicans* is a yeast known to cause a host of skin infections (in areas such as the groin and perianal region) (Singleton, Definition of *Candida* at 142-143) and nail infections (like pyogenic paronychia and onychomycosis) (Singleton, Definition of paronychia at 638). *Trichophyton* is a known fungus, a dermatophyte, found in the hair, skin and nails and known to cause infections such as *tinea cruris* (causing the appearance of lesions in the groin area), *tinea pedis* (athlete's foot) and *tinea unguium* (nail infections) (Singleton, Definition of dermatophyte at 265 and ringworm at 770).

If substances containing the active ingredient, pirfenidone, are known anti-fibrotic agents capable of treating skin lesions of mammals when applied topically and it is known that skin lesions and infections can be caused by microorganisms as mentioned herein, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use the methods disclosed by Margolin to apply the pharmaceutical composition taught Gadekar to treat conditions caused by microorganisms on the dermis of or within the layers of the dermis of

the skin. In the absence of a showing of unexpected results commensurate in scope with the claims, the instantly claimed methods would have been *prima facie* obvious in view of the Margolin and Gadekar disclosures.

Claim Rejections – 35 U.S.C. §103(a) – Obvious Double-Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b). Claims 10 and 16-17 are rejected pursuant to 35 U.S.C. §103(a) as being obvious due to double-patenting.

I. Claim 10

Claim10 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 4 of U.S. Patent No. 5,310,562 (Margolin patent).

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

A. Claim 10 of the instant application is for "a method of treating one or more conditions created by microorganisms" while claim 4 of the Margolin patent is for "a method for the reparation and prevention of fibrotic lesional tissue." The specification of claim 4 of the Margolin patent, at column 2, lines 43-49, defines the "'anti-fibrotic' activity discovered by the present inventor" as referring to the "ability of an active substance to (1) prevent an excessive pathologic accumulation of collagenous scar or connective tissue in various body structures and organs (usually triggered by some injury, allergy, ***infection*** ...)."(Emphasis added). It is well-known by those of ordinary skill in the art that infections are conditions that may be caused by microorganisms.

B. Claim 10 of the instant application and claim 4 of the Margolin patent are both directed to the mammalian species.

C. Claim 10 of the instant application and claim 4 of the Margolin patent both involve topical application of a pharmaceutical substance containing pirfenidone as an active ingredient. Claim 10 discloses that "a pharmaceutical substance containing an effective amount of pirfenidone." Page 4, lines 25-27 and 34-36 of the specification in the instant application defines "an effective amount of pirfenidone" as being "an amount of from about 5% to about 10%," as stated specifically in claim 4 of the Margolin patent.

In light of the foregoing, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application, which matured into a patent. See MPEP § 804.

II. Claims 16, 17, & 18

Claims 16 and 17are rejected on the ground of nonstatutory double patenting over claim 16 of the Margolin patent in light of U.S. Patent 5,468,492 (Szaloki et al.) since the claims, if allowed, would improperly extend the "right to exclude" already granted in the Margolin patent.

The subject matter claimed in the instant application is fully disclosed in the Margolin patent and is covered by that patent since the patent and the application are claiming common subject matter, as follows:

Claim 16 of the instant application is drawn to a "pharmaceutical substance with the following composition, in weight percent:

Pirfenidone (USAN) Powder	5.0
Propylene Glycol 400 USP	23.5
Sterile Distilled Water	30.5
Stearyl Alcohol USP	20.5

White Petrolatum USP 20.5

Claim 17 of the instant application is drawn to a "pharmaceutical substance with the following composition, in weight percent:

Pirfenidone (USAN) Powder	10.0
Propylene Glycol 400 USP	14.3
Sterile Distilled Water	41.7
Stearyl Alcohol USP	17.0
White Petrolatum USP	17.0

Claim 18 of the instant application is drawn to a "pharmaceutical substance with the following composition, in weight percent:

Pirfenidone (USAN) Powder	50 gms
Stearic Acid USP	30 gms
Empilan SE 40	30 gms
Isopropyl Myristate	30 gms
Mineral Oil	115 gms
Stearyl Alcohol USP	5 gms
Propylene Glycol 400 USP	50 gms
Sterile Distilled Water	690 ml (690 gms)

Similarly, Claim 4 of the Margolin patent is drawn to "[a] pharmaceutical composition containing 5-methyl-1-phenyl-2-(1H) pyridone as an active ... ingredient present in a topically administered dosage form in an amount of from about 5% to about 10%." Pirfenidone is the common name for 5-methyl-1-phenyl-2-(1H) pyridone.

In addition to claims 16, 17, and 18 of the instant application being drawn to pirfenidone, the claims are also drawn to other embodiments that complete the pharmaceutical composition. Importantly, the dictionary definitions of these components and their variability among those practicing the art are discussed at column 10, lines 45-52 of the Margolin patent, which states:

> While the invention has been described in detail and with reference to specific embodiments thereof, such have been provided for purposes of illustrating the invention and are not intended as

> limitations thereon. It will thus be apparent to one skilled in the art that various changes and modifications can be made therein without departing from the spirit and scope of the claim.

Claims 16 and 17 of the instant application are drawn to pharmaceutical substances specifically embodied by propylene glycol, sterile distilled water, stearyl alcohol, and white petrolatum, with "effective amount of pirfenidone" as the active ingredient. Szaloki et al. teach that propylene glycol, as an alternative to use of isopropyl palmitate, isostearyl isostearate, etc., is a solid emulsifier capable of forming the base for topically applied ointments (Col. 2, lines 47-49). Szaloki et al. also teach that sterile distilled water, as an alternative to use of deionized or demineralized water, etc. is a known liquid solvent or dilutant utilized as 30 to 90 weight percent of pharmaceutical compositions used as ointments (Col. 4, lines 8-10). Szaloki et al. also teach that stearyl alcohol, as an alternative to use of arachidyl and behenyl alcohols, etc., is a known suitable fatty alcohol (Col. 3, lines 8-10). Szaloki et al. also teach that petrolatum, as an alternative to use of liquid paraffin, etc. is an oil known to be used conventionally as a liquid carrier, with the ability to increase the stability of an emulsifier, providing a cosmetically suitable viscosity of a pharmaceutical composition (Col. 3, lines 11-18).

In light of the foregoing, there is no apparent reason why applicant was prevented from presenting claims corresponding to claims 16 and 17 of the instant application during prosecution of the earlier Margolin application that matured into a patent. See MPEP § 804.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Hughes whose telephone number is 571-272-6026. The examiner can normally be reached from 9:00 AM to 5:00 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel, can be reached at 571-272-0718. The fax number for the organization where this application or proceeding is assigned is 571-273-6026.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR of Public PAIR. Status information for unpublished applications is available through Public PAIR only. For information about the PAIR system, see http://pair-direct-uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

11 October 2006
ARH

Ardin H. Marschel 10/14/06

ARDIN H. MARSCHEL
SUPERVISORY PATENT EXAMINER